

REMARKS

Claims 1, 8, 23, 27, 32 and 33 are amended. The amendment to claim 1 is fully supported in the specification by at least page 11, lines 1-3. The amendments to claims 8, 23, 27, 32 and 33 are fully supported in the specification by at least page 15, lines 18-20. No new matter is added. Accordingly, claims 1-36 remain pending. In light of the foregoing claim amendments and the following remarks, Applicants respectfully request reconsideration and allowance of all pending claims.

Claim Rejections

Each of the claim rejections will be responded to below in the same order as outlined in the outstanding Office Action.

Claims 8, 12-14, 17-18, 22, 27 and 31

Claims 8, 12-14, 17-18, 22, 27 and 31 stand rejected under 35 U.S.C. §103(a) as unpatentable over Yorke-Smith (U.S. Patent No. 5,548,648) in view of Gutowitz (U.S. Patent No. 5,365,589). Applicants respectfully traverse.

Claims 8, 12-14 and 17

The outstanding Office Action asserts that "selecting and transforming selected portions of data segments" is disclosed by Gutowitz at col. 35, lines 64-67. For convenience, the cited portion of Gutowitz is reproduced below.

Partial encryption enables information of different levels of security and/or destined for different uses to be encrypted into the same ciphertext. This property has many applications. Here several such applications will be described.

Applicants respectfully disagree that this cited portion of Gutowitz discloses "selecting and transforming selected portions of data segments" as asserted in the

1 Office Action. Rather, this cited portion of Gutowitz has no mention of "selecting"
 2 at all. Further, it appears that Gutowitz used the term "partial encryption" in
 3 conjunction with the term "partial encryption/decryption" as indicated by col. 35,
 4 lines 37-67 (which is the title of a section of the disclosure containing the portion
 5 cited by the Office Action). Applicants could find no other mention in Gutowitz of
 6 "partial encryption" outside of the term "partial encryption/decryption". For
 7 example, Gutowitz discloses at col. 35, lines 42- 62)

8 ...there is a very powerful method defined herein as
 9 partial encryption/-decryption. ... by applying D to the
 10 doubly-encrypted message, A recovers the information
 11 which was stored during encryption with E. A can still
 12 not read the message M since it remains encrypted, but
 13 may have gained information useful for further
 14 processing of the singly-encrypted message E'(M).
 15 Thus, A has partially decrypted the doubly-encrypted
 16 message E(E'(M)). (emphasis added)

17 It appears Gutowitz discloses that an encryption process E' is applied to the
 18 entire message M resulting in E'(M). Then an encryption process E is applied to the
 19 entirety of E'(M) resulting in E(E'(M)). There is no mention of "selecting" portions
 20 in this cited portion of Gutowitz. Thus, this cited disclosure in no way teaches or
 21 suggests "selecting and transforming *selected* portions of data segments" as asserted
 22 by the Office Action.

23 As discussed in the previous Office Action Response (March 23, 2004), an
 24 implementation according to claim 8 not all segments need to be transformed (i.e.,
 25 the selected segments are transformed). This is wholly different from Yorke-Smith's
 26 specific requirement to encrypt "each data segment" (see, e.g., col. 1, lines 51-52)
 27 and Gutowitz's partial encryption/decryption process of an entire message M (see
 28 col. 35, lines 37-67). According, claim 8 should be allowable over the combination
 29 of Yorke-Smith and Gutowitz for at least these reasons. Additionally, claims 12-14

1 and 17 which depend from claim 8 should be allowable for at least similar reasons,
 2 as well as the additional recitations they contain.

3 **Claim 18**

4 In the rejection of claim 18, col. 35, lines 39-67 of Gutowitz are cited as
 5 disclosing "partially encrypting image file...", which appears to be cited as teaching
 6 or suggesting "establishing parameters prescribing a desired quantity of protection to
 7 be applied to a software product" As discussed above, this portion of Gutowitz
 8 appears to be directed to partial encryption/decryption of an entire message M.
 9 Applicants do not understand has such a disclosure teaches or suggests "establishing
 10 parameters prescribing a quantity of protection to be applied to a software
 11 product" For example, the cited portion of Gutowitz does not mention "quantity"
 12 in any way, and thus cannot teach or suggest "establishing parameters prescribing a
 13 quantity of protection" as recited in claim 18. Additionally, claim 22, which depends
 14 from claim 8 should be allowable for at least similar reasons, as well as the
 15 additional recitations it contains.

16 **Claims 27 and 31**

17 Claims 27 and 31 stand rejected on the same basis as claim 18. Therefore,
 18 claims 27 and 31 are patentable over the cited references for at least the same reasons
 19 that claim 18 is patentable over the cited references.

20 **Claims 10-11 and 29-30**

21 Claims 10, 11 and 29-30 stand rejected under 35 U.S.C. §103(a) as
 22 unpatentable over Yorke-Smith in view of Gutowitz and further in view of Sung
 23 (U.S. Patent No. 5,768,372). Applicants respectfully traverse.

24 **Claims 10 and 11**

Sung col. 3, lines 1-20 are cited as disclosing, "randomly selecting the segments". As discussed in the previous Office Action Response (March 23, 2004), Sung appears to require encryption "on each particular set" (see, e.g., col. 3, lines 5-7). Sung fails to even contemplate "selecting multiple segments from the plurality of segments" as recited in claim 8 and does not overcome the deficiencies of Yorke-Smith and Gutowitz. Thus, claim 8 is patentable over the combination of these three references. As claims 10 and 11 depend from claim 8 and, thus, are patentable over these references for at least the same reasons.

Claims 29 and 30

Claims 29 and 30 depend from claim 27, which Applicants believe is patentable over the combination of Yorke-Smith and Gutowitz as described above. Sung is cited in the rejection of claims 29 and 30 as disclosing a pseudo random generator. This disclosure does not overcome the deficiency of Sung noted above in conjunction with the rejections of claims 10-11 in that Sung appears to require encryption "on each particular set" (see, e.g., col. 3, lines 5-7). Thus, Sung does not overcome the deficiencies of Yorke-Smith and Gutowitz with regard to claim 27. Thus, claim 27 is patentable over the cited combination. As claims 29 and 30 depend from claim 27, the combination of Yorke-Smith, Gutowitz and Sung also fail to render these dependent claims.

Claim 9

Claim 9

Claim 9 stands rejected under 35 U.S.C. §103(a) as unpatentable over Yorke-Smith in view of Gutowitz and further in view of Schuster (U.S. Patent No. 6,483,600). Applicants respectfully traverse.

Schuster is cited as disclosing "overlapped data segment (see Schuster, col. 15, lines 29-42, redundant packets)." The disclosure of redundant packets does not overcome the deficiencies of Yorke-Smith and Gutowitz with regard to the rejection of claim 8. Therefore, as claim 9 depends from claim 8, claim 9 is patentable over these three cited references for at least the reasons that claim 8 is patentable.

Claims 15, 20 and 28

Claims 15, 20 and 28

Claims 15, 20 and 28 stand rejected under 35 U.S.C. §103(a) as unpatentable over Yorke-Smith in view of Gutowitz and further in view of Collberg (U.S. Patent No. 6,668,325). Applicants respectfully traverse.

Claims 15, 20 and 28 respectively depend from claims 8, 18 and 27. As previously discussed, claims 8, 18 and 27 are patentable over Yorke-Smith and Gutowitz. The Office Action acknowledges that Yorke-Smith "do not explicitly disclose wherein the augmenting comprises applying a protection technique selected from a group of protection techniques comprising code integrity verification, acyclic code integrity verification, cyclic code integrity verification, secret key scattering, obfuscated function execution, encryption/decryption, probabilistic checking, Boolean check obfuscation, in-lining, reseeding pseudo random number generators with time varying inputs, anti-disassembly methods, varying execution paths between runs, anti-debugging methods, and time/space separation between tamper detection and response" and cites Collberg as disclosing this feature.

However, such a disclosure does not overcome the deficiencies of Yorke-Smith and Gutowitz in the rejections of independent claims 8, 18 and 27. Thus, claims 8, 18 and 27 are patentable over the cited combination. As claims 15, 20 and 28 depend from claims 8, 18 and 27, these dependent claims are patentable over the

1 cited combination of Yorke-Smith, Gutowitz and Collberg for at least the same
 2 reasons.

3 **Claim 19**

4 Claim 19

5 Claim 19 stands rejected under 35 U.S.C. §103(a) as unpatentable over
 6 Yorke-Smith in view of Gutowitz and further in view of Levit (U.S. Patent No.
 7 5,420,942). Applicants respectfully traverse.

8 Claim 19 is dependent from claim 18. As discussed above, claim 18 is
 9 patentable over Yorke-Smith and Gutowitz. Levit is cited as disclosing "allowing a
 10 user manually entering parameter". However, such a disclosure does not overcome
 11 the deficiencies of Yorke-Smith and Gutowitz in the rejection of independent
 12 claim 18. Thus, claim 18 is patentable over the cited combination of Yorke-Smith,
 13 Gutowitz and Levit. Because claim 19 depends from claim 18, claim 19 is
 14 patentable over the cited combination of Yorke-Smith, Gutowitz and Levit for at
 15 least the same reasons that claim 18 is patentable.

16 **Claims 16 and 21**

17 Claims 16 and 21

18 Claims 16 and 21 stand rejected under 35 U.S.C. §103(a) as unpatentable
 19 over Yorke-Smith in view of Gutowitz and further in view of Simmon (U.S. Patent
 20 No. 6,548,648). Applicants respectfully traverse.

21 Claims 16 and 21 respectively depend from claims 8 and 18. As previously
 22 discussed, claims 8 and 18 are patentable over Yorke-Smith and Gutowitz. Simmon
 23 is cited as disclosing "applying a form of protection in which a checksum can be
 24 computed on a set of bytes of the digital goods without actually reading the bytes."

1 However, such a disclosure does not overcome the deficiencies of Yorke-
 2 Smith and Gutowitz in the rejection of independent claims 8 and 18. Thus, claims 8
 3 and 18 are patentable over the cited combination of Yorke-Smith, Gutowitz and
 4 Simmon. Because claims 16 and 21 depend from claims 8 and 18, claims 16 and 21
 5 are patentable over the cited combination of Yorke-Smith, Gutowitz and Simmon for
 6 at least the same reasons that claim 8 and claim 18 are patentable over the cited
 7 combination of these three references.

8 **Claims 23, 26 and 32-35**

9 **Claims 23 and 26 and 32-35**

10 Claims 23, 26 and 32-35 stand rejected under 35 U.S.C. §103(a) as
 11 unpatentable over Yorke-Smith in view of Gutowitz and further in view of Sung.
 12 Applicants respectfully traverse.

13 Gutowitz is cited as disclosing, "applying protection to selected portion of the
 14 original digital good" at col. 35, lines 64-67. This same text was cited in the
 15 rejection of claim 8. Applicants respectfully disagree that this cited portion of
 16 Gutowitz discloses "applying protection to selected portion of the original digital
 17 good" as asserted in the Office Action. Rather, this cited portion of Gutowitz has no
 18 mention of "selected portion" at all. As discussed in the rejection of claim 8, the
 19 cited portion of Gutowitz discloses that a partial encryption/decryption is applied to
 20 an entire message M.

21 Sung is cited as disclosing "apply protection tools selected from the set of
 22 protection tools to the original digital goods in a random manner . . ."

23 In an implementation according to claim 23, not all segments need to be
 24 transformed (i.e., only the selected segments are transformed). This is wholly
 25 different from Yorke-Smith's specific requirement to encrypt "each data segment"

(see, e.g., col. 1, lines 51-52) and Gutowitz's partial encryption/decryption process of an entire message M (see col. 35, lines 37-67). The cited portion of Sung is not relevant to this feature. . Thus, claim 23 is patentable over the cited combination of Yorke-Smith, Gutowitz and Sung. Because claim 26 depends from claim 23, claim 26 is patentable over the cited combination of Yorke-Smith, Gutowitz and Sung for at least the same reasons that claim 23 is patentable over this combination.

Claim 32

Gutowitz is cited as disclosing "applying protection to selected portion of the original digital good" at col. 35, lines 64-67. This same text was cited in the rejection of claim 8. Applicants respectfully disagree that this cited portion of Gutowitz discloses "applying protection to selected portion of the original digital good" as asserted in the Office Action. Rather, this cited portion of Gutowitz has no mention of "selected portion" at all. As discussed in the rejection of claim 8, the cited portion of Gutowitz discloses that a partial encryption/decryption is applied to an entire message M. Sung is cited as disclosing, "applying various forms of protection to a digital goods"

An implementation according to claim 32 need not have all segments transformed (i.e., only the selected segments are transformed). This is wholly different from Yorke-Smith's specific requirement to encrypt "each data segment" (see, e.g., col. 1, lines 51-52) and Gutowitz's partial encryption/decryption process of an entire message M (see col. 35, lines 37-67). The cited portion of Sung is not relevant to this feature. According, claim 32 should be allowable over the cited combination of Sung, Yorke-Smith and Gutowitz for at least these reasons.

Claim 33-35

Independent claim 33 is rejected on the same basis as claim 23. As discussed above, claim 23 is patentable over the cited combination of Sung, Yorke-Smith and Gutowitz. Therefore, claim 33 and its dependent claims 34 and 35 are patentable over the cited combination for at least the same reasons that claim 23 is patentable over the cited combination.

Claims 24 and 36Claims 24 and 36

Claims 24 and 36 stand rejected under 35 U.S.C. §103(a) as unpatentable over Yorke-Smith in view of Gutowitz and further in view of Sung and Collberg. Applicants respectfully traverse.

Claims 24 and 36 respectively depend from claims 23 and 33. As previously discussed, claims 23 and 33 are patentable over Sung, Yorke-Smith and Gutowitz. The Office Action acknowledges that Yorke-Smith "do not explicitly discloses wherein the various forms of protection are selected from a group of protection tools comprising code integrity verification, acyclic code integrity verification, cyclic code integrity verification, secret key scattering, obfuscated function execution, encryption/decryption, probabilistic checking, Boolean check obfuscation, in-lining, reseeding pseudo random number generators with time varying inputs, anti-disassembly methods, varying execution paths between runs, anti-debugging methods, and time/space separation between tamper detection and response" and cites Collberg as disclosing this feature.

However, such a disclosure does not overcome the deficiencies of Sung, Yorke-Smith and Gutowitz in the rejections of independent claims 23 and 33. Thus, claims 23 and 33 are patentable over the cited combination of Sung, Yorke-Smith,

Gutowitz and Collberg for at least the same reasons that these independent claims are patentable over the cited combination of Sung, Yorke-Smith and Gutowitz as discussed above. As claims 24 and 36 depend from claims 23 and 33, these dependent claims are patentable over the cited combination of Yorke-Smith, Gutowitz, Sung and Collberg for at least the same reasons.

Claim 25

Claim 25

Claim 25 stands rejected under 35 U.S.C. §103(a) as unpatentable over Yorke-Smith in view of Gutowitz and Sung, and further in view of Simmon. Applicants respectfully traverse.

Claim 25 is dependent from claim 23. As discussed above, claim 23 is patentable over the cited combination of Yorke-Smith, Gutowitz and Sung. Simmon is cited as disclosing, "performing checksum on data packet ...".

However, such a disclosure does not overcome the deficiencies of the cited combination of Yorke-Smith, Gutowitz and Sung in the rejection of independent claim 23. Thus, claim 23 is patentable over the cited combination of Yorke-Smith, Gutowitz, Sung and Simmon. Because claim 25 depends from claim 23, claim 25 is patentable over the cited combination of Yorke-Smith, Gutowitz, Sung and Simmon for at least the same reasons that claim 23 is patentable.

Claims 1-4 and 7

Claims 1-4 and 7

Claims 1-4 and 7 stand rejected under 35 U.S.C. §103(a) as unpatentable over Yorke-Smith in view of Gutowitz and Sung, and further in view of Schuster. Applicants respectfully traverse.

1 The Office Action acknowledges that Yorke-Smith does not disclose,
 2 "wherein at least two of the segments overlap one another" and then cites Schuster
 3 "(see Schuster, col. 15, lines 29-42, redundant packets)" as disclosing such a feature.

4 Applicants respectfully assert that "redundant" is not equivalent to "overlap".
 5 To speed prosecution, Claim 1 is amended to make more clear that overlapping
 6 segments are not equivalent. Because "redundant" is not equivalent to "overlap",
 7 Schuster does not teach or suggest the feature, "wherein at least two of the segments
 8 overlap on another, wherein overlapping segments are different from each other
 9 but include some identical data" as recited in amended claim 1. Consequently,
 10 independent claim 1 and its dependent claims 2-4 and 7 are patentable over the cited
 11 combination of Yorke-Smith, Gutowitz, Sung and Schuster

12 **Claim 5**

13 **Claim 5**

14 Claim 5 stands rejected under 35 U.S.C. §103(a) as unpatentable over Yorke-
 15 Smith in view of Gutowitz, Sung and Schuster, and further in view of Collberg.
 16 Applicants respectfully traverse.

17 Claim 5 is dependent from claim 1. As discussed above, claim 1 is patentable
 18 over the cited combination of Yorke-Smith, Gutowitz, Sung and Schuster. Collberg
 19 is cited as disclosing, "wherein the various forms of protection are selected from a
 20 group of protection tools comprising code integrity verification, acyclic code
 21 integrity verification, cyclic code integrity verification, secret key scattering,
 22 obfuscated function execution, encryption/decryption, probabilistic checking,
 23 Boolean check obfuscation, in-lining, reseeding pseudo random number generators
 24 with time varying inputs, anti-disassembly methods, varying execution paths .

1 between runs, anti-debugging methods, and time/space separation between tamper
 2 detection and response" as recited in claim 5.

3 However, such a disclosure does not overcome the deficiencies of the cited
 4 combination of Yorke-Smith, Gutowitz, Sung and Schuster in the rejection of
 5 independent claim 1. Thus, claim 1 is patentable over the cited combination of
 6 Yorke-Smith, Gutowitz, Sung, Schuster and Collberg. Because claim 5 depends
 7 from claim 1, claim 5 is patentable over the cited combination of Yorke-Smith,
 8 Gutowitz, Sung, Schuster and Collberg for at least the same reasons that claim 1 is
 9 patentable.

10 **Claim 6**

11 **Claim 6**

12 Claim 6 stands rejected under 35 U.S.C. §103(a) as unpatentable over Yorke-
 13 Smith in view of Gutowitz, Sung and Schuster, and further in view of Simmon.
 14 Applicants respectfully traverse.

15 Claim 6 is dependent from claim 1. As discussed above, claim 1 is patentable
 16 over the cited combination of Yorke-Smith, Gutowitz, Sung and Schuster. Simmon
 17 is cited as disclosing, "performing checksum on data packet".

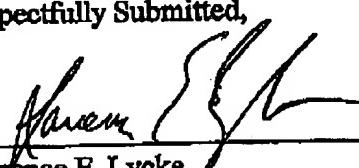
18 However, such a disclosure does not overcome the deficiencies of the cited
 19 combination of Yorke-Smith, Gutowitz, Sung and Schuster in the rejection of
 20 independent claim 1. Thus, claim 1 is patentable over the cited combination of
 21 Yorke-Smith, Gutowitz, Sung, Schuster and Simmon. Because claim 6 depends
 22 from claim 1, claim 6 is patentable over the cited combination of Yorke-Smith,
 23 Gutowitz, Sung, Schuster and Simmon for at least the same reasons that claim 1 is
 24 patentable.

25

CONCLUSION
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2 In view of the foregoing amendments and remarks, Applicants believe all
3 pending claims are allowable. Accordingly, a Notice of Allowability is
4 respectfully requested.

Respectfully Submitted,

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